

# Installing Synopsys Tools

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Version B-2008.09, September 2008

Comments?

Send comments on the documentation by going to <http://solvnnet.synopsys.com>, then clicking "Enter a Call to the Support Center."

**SYNOPSYS®**

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# Preface

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This preface includes the following sections:

- [What's New in This Release](#)
- [About This Guide](#)
- [Customer Support](#)

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## What's New in This Release

Information about new features, enhancements, and changes, along with known problems and limitations and resolved Synopsys Technical Action Requests (STARs), is available in the *Installation Release Notes* in SolvNet.

To see the *Installation Release Notes*,

1. Go to the Download Center on SolvNet located at the following address:

<http://solvnet.synopsys.com/DownloadCenter>

If prompted, enter your user name and password. If you do not have a Synopsys user name and password, follow the instructions to register with SolvNet.

2. Select Installation, and then select a release in the list that appears.

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## About This Guide

This document provides information and procedures required to install Synopsys tools using the Synopsys Installer.

- The installation instructions in this guide reflect the latest version of Synopsys software for each product. Not all products are the same version.
- For Synopsys tool specific installation information, see <http://www.synopsys.com/install> and refer to the product installation notes of interest.
- This document includes download and installation instructions common to Synopsys products that use the Synopsys Installer.
- This document covers obtaining swap space information and checking the data-size limit.
- The Synopsys Common Licensing information has been moved. See the *Synopsys Common Licensing installation Notes* at <http://www.synopsys.com/install> for information about downloading and installing SCL.

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## Audience

This guide is written for system administrators responsible for installing Synopsys software tools. All instructions in this guide are for UNIX systems unless otherwise indicated.

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## Related Publications

For additional information about Synopsys tools, see

- Documentation on the Web, which is available through SolvNet at <http://solvnet.synopsys.com/DocsOnWeb>.
- The product download or CD or DVD directory.

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## Conventions

The following conventions are used in Synopsys documentation.

Convention	Description
<code>Courier</code>	Indicates command syntax.
<i>Courier italic</i>	Indicates a user-defined value in Synopsys syntax, such as <i>object_name</i> . (A user-defined value that is not Synopsys syntax, such as a user-defined value in a Verilog or VHDL statement, is indicated by regular text font italic.)
<b>Courier bold</b>	Indicates user input—text you type verbatim—in Synopsys syntax and examples. (User input that is not Synopsys syntax, such as a user name or password you enter in a GUI, is indicated by regular text font bold.)
[ ]	Denotes optional parameters, such as <i>pin1 [pin2 ... pinN]</i>
	Indicates a choice among alternatives, such as <i>low   medium   high</i> (This example indicates that you can enter one of three possible values for an option: low, medium, or high.)
—	Connects terms that are read as a single term by the system, such as <i>set_annotated_delay</i>
Control-c	Indicates a keyboard combination, such as holding down the Control key and pressing c.
\	Indicates a continuation of a command line.
/	Indicates levels of directory structure.
Edit > Copy	Indicates a path to a menu command, such as opening the Edit menu and choosing Copy.

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## Customer Support

Customer support is available through SolvNet online customer support and through contacting the Synopsys Technical Support Center.

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### Accessing SolvNet

SolvNet includes an electronic knowledge base of technical articles and answers to frequently asked questions about Synopsys tools. SolvNet also gives you access to a wide range of Synopsys online services including software downloads, documentation on the Web, and “Enter a Call to the Support Center.”

To access SolvNet, go to the SolvNet Web page at the following address:

<http://solvnet.synopsys.com>

If prompted, enter your user name and password. If you do not have a Synopsys user name and password, follow the instructions to register with SolvNet.

If you need help using SolvNet, click HELP in the top-right menu bar or in the footer.

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### Contacting the Synopsys Technical Support Center

If you have problems, questions, or suggestions, you can contact the Synopsys Technical Support Center in the following ways:

- Open a call to your local support center from the Web by going to <http://solvnet.synopsys.com> (Synopsys user name and password required), and then clicking “Enter a Call to the Support Center.”
- Send an e-mail message to your local support center.
  - E-mail [support\\_center@synopsys.com](mailto:support_center@synopsys.com) from within North America.
  - Find other local support center e-mail addresses at [http://www.synopsys.com/support/support\\_ctr](http://www.synopsys.com/support/support_ctr)
- Telephone your local support center.
  - Call (800) 245-8005 from within the continental United States.
  - Call (650) 584-4200 from Canada.
  - Find other local support center telephone numbers at [http://www.synopsys.com/support/support\\_ctr](http://www.synopsys.com/support/support_ctr)



# 1

## Preinstallation Setup

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This section provides information about steps to complete before you install Synopsys tools.

The following sections are included:

- [Finding Your Site Identification Number](#)
- [Acquiring a License](#)
- [Creating the Synopsys Root Directory](#)
- [Defining the SYNOPSIS Environment Variable](#)
- [Checking Your Hardware and Software Configuration](#)
- [Configuring the Environment](#)

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## Finding Your Site Identification Number

The default site identification number is 000. When you are prompted to enter your site ID during the installation process, you can leave the default value of 000 and press Enter to continue the installation.

It is recommended that before you install any Synopsys products, you locate and make a note of your site ID. You will need this information to open a support call or to register for SolvNet.

Your site ID is in your Synopsys Order Notification e-mail. (If you receive physical media, your site ID was shipped in the package with your Synopsys tools.) Also, you can locate your site ID by examining the header information in your Synopsys license file. The site ID information is in the following format:

```
# SYNOPSYS INC. KEY CERTIFICATE
# Site ID: xxx
```

If you are still unable to locate your site ID, contact your Synopsys sales representative.

Provided that you entered a valid site identification number during installation, you can check it at any time by viewing your `site_info` file.

```
$SYNOPSYS/admin/license/site_info
```

---

## Acquiring a License

The Synopsys Common Licensing (SCL) system provides a single, common licensing base for all Synopsys tools. The SCL software and the documentation describing how to install and configure it are separate from the tools that use it.

Before you can use Synopsys tools, you must do the following:

- Retrieve your license key file from the SmartKeys Web page at <http://solvnet.synopsys.com/SmartKeys>
- Install the SCL software.

See the *Synopsys Common Licensing Installation Notes* at <http://www.synopsys.com/install> for information about downloading and installing SCL

Note:

You can install SCL before or after you install your Synopsys tools. However, you cannot use your Synopsys tools until you have installed, configured, and started SCL.

For more information about licensing setup, see the following documents:

- Synopsys Licensing QuickStart Guide Web page (at <http://www.synopsys.com/keys>)
- *Synopsys Common Licensing Administration Guide* (at [http://www.synopsys.com/support/keys/docs/scl\\_10.9.2\\_admin\\_guide.pdf](http://www.synopsys.com/support/keys/docs/scl_10.9.2_admin_guide.pdf))

The Synopsys Common Licensing Administration Guide is also included in the Synopsys Common Licensing download directory and on the Synopsys Common Licensing CD.

---

## Creating the Synopsys Root Directory

To create a new root directory for this Synopsys release, enter

```
% mkdir -p /usr/synopsys/product_version
```

To set the permissions on the new directory, enter

```
% chmod 755 /usr/synopsys/product_version
```

### Important:

Install each version of the software in a new directory. Do not install different versions of Synopsys software in the same directory.

---

## Defining the SYNOPSIS Environment Variable

Set the `SYNOPSIS` environment variable (`$SYNOPSIS`) in the shell that you are using: C, Bourne, Korn, or Bash. In the following examples, the `root_directory` argument is the name of the Synopsys root directory.

If you are using the C shell, enter the following command to set the `SYNOPSIS` environment variable:

```
% setenv SYNOPSIS root_directory
```

If you are using the Bourne, Korn, or Bash shell, enter the following command to set the `SYNOPSIS` environment variable:

```
# SYNOPSIS=root_directory; export SYNOPSIS
```

Note:

The SYNOPSIS environment variable is not required by all tools. In some cases, another environment variable must be set; in other cases, no variable is required. For details, see the individual product chapters.

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## Checking Your Hardware and Software Configuration

You must check your hardware and software configuration (including patch requirements) before you attempt to install any Synopsys tools.

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### Supported Platforms and Operating Systems

Table 1-1 on page 1-4 lists the supported platforms, operating systems, and corresponding Synopsys platform keywords for this release. Many platforms require operating system (OS) patches.

For detailed information, see the Supported Platforms Guide page on the Synopsys Web site. Go to

[http://www.synopsys.com/products/sw\\_platform.html](http://www.synopsys.com/products/sw_platform.html)

Under Supported Platforms Guides, select the appropriate foundation for your release. This Web page provides information about supported hardware, operating systems, and required OS patches. If the required patch described on this page is not available from the platform vendor, install the most recent patch instead.

Table 1-1 Supported Platforms, Operating Systems, and Keywords

Platform	Operating system	Synopsys platform keyword	Window environment
AMD Opteron	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	amd64 (64-bit mode) linux (32-bit mode) <sup>2</sup>	GNOME
AMD Opteron	SUSE Enterprise Linux 9, 10 <sup>1</sup>	suse64 (64-bit mode) suse32 (32-bit mode)	KDE
EM64T	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	amd64 (64-bit mode) linux (32-bit mode) <sup>2</sup>	GNOME
EM64T	SUSE Enterprise Linux 9, 10 <sup>1</sup>	suse64 (64-bit mode) suse32 (32-bit mode)	KDE
IBM RS/6000	AIX 5.3	rs6000 (32-bit mode) aix64 (64-bit mode)	CDE

Table 1-1 Supported Platforms, Operating Systems, and Keywords

Platform	Operating system	Synopsys platform keyword	Window environment
IA-32 (x86)	Red Hat Enterprise Linux v4, 5 <sup>1</sup>	linux (32-bit mode)	GNOME
IA-32 (x86)	SUSE Enterprise Linux 9, 10 <sup>1</sup>	suse32 (32-bit mode)	KDE
Sun SPARC	Solaris 9, 10 <sup>1</sup>	sparc64 (64-bit mode) sparcOS5 (32-bit mode)	CDE

1. Binary-compatible hardware platform or operating system. Note, however, that binary compatibility is not guaranteed. See <http://www.synopsys.com/products/platforms> for latest information.

2. The 32-bit (x86) and 64-bit (x86\_64) Linux software is binary compatible with Intel EM64T or AMD Opteron running Red Hat Enterprise Linux. See <http://www.synopsys.com/products/platforms> for latest information.

---

## Product Availability

Products are initially made available for download by electronic software transfer (EST), with CD or DVD media available at a later date. Only eligible sites can receive CD or DVD media.

The main contact at each customer site is automatically notified by e-mail when Synopsys products are available for download. Sites eligible for CD or DVD media receive a notification when CD or DVDs are available.

---

## 64-Bit Platform Support

The Synopsys tools support 64-bit operation on Solaris, Linux, and AIX platforms. When you run the tools in 64-bit mode, the upper limit for virtual address space is extended beyond the 4-gigabyte limit imposed by the 32-bit mode, allowing you to process larger designs. With both the 32-bit and 64-bit platforms installed, you have the flexibility to run either 32-bit or 64-bit applications without running out of memory.

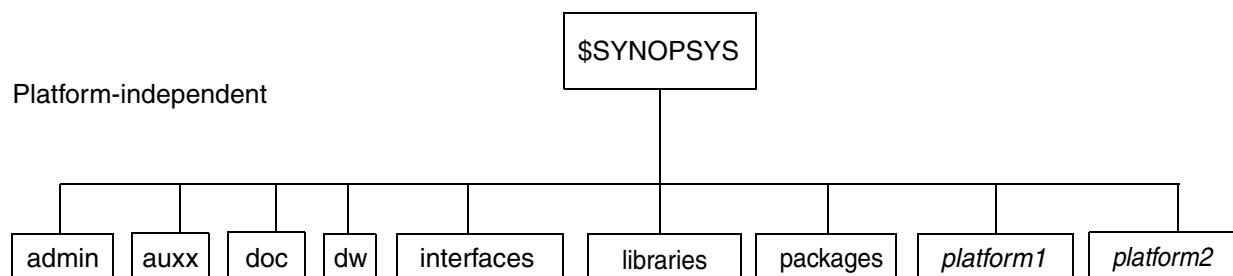
You can install the 64-bit version of the Synopsys tools in the same root directory as the 32-bit version or in a separate directory.

---

## Multiple-Platform Installation

When you install tools on a network that connects different platforms, the result is the directory tree shown in [Figure 1-1](#).

Figure 1-1 Illustration of a Multiple-Platform Installation



Each Synopsys product includes a platform-independent package containing files common to all platforms (indicated by the shaded box in [Figure 1-1](#)). When you select multiple platforms, the installation script installs one platform-independent package and a platform-dependent package for each selected platform.

If you have previously installed a product on one platform and want to install it on another platform,

1. Rerun the installation script for the product.
2. In the installation script,
  - Answer **n** to the query about installing the platform-independent package.
  - Specify the new platform when queried about which platform to install.

---

## Configuring the Environment

The UNIX kernel defines hard per-process limits on the maximum amount of memory that can be used, and the `limit` command creates soft limits. These limits can cause processes (jobs) to fail even when memory is available.

---

## Obtaining Swap Space Information

If you receive an “out of memory” error message, make sure that you are not running out of swap space on the system. For example, say you have a large job running on a machine that has abundant swap space. You try to run Design Compiler on the machine, but the application terminates with a fatal out-of-memory message before the machine runs out of swap space.

This situation occurs because UNIX limits the amount of memory a process can consume while it is running. If a process reaches these limits before the system runs out of swap space, the job terminates with the fatal out-of-memory error message. These limits are built into the UNIX OS to prevent a single job or process from consuming all system resources (swap space, CPU time, number of processes, and so on), thereby depleting resources for other processes.

You can use the `swap -l` command for Sun SPARC systems to obtain swap space information. For example,

```
% swap -l
swapfile          dev  swaplo  blocks  free
/dev/dsk/c0t3d0s1 32,25      8  822520  628872
```

Note:

To determine available swap space on systems other than Sun SPARC, contact your system administrator.

---

## System Limits

The following limits are applicable to Synopsys tools:

- Data size – The maximum data size (including stack) for the process. This is the most important limit. It can be set at two levels:
  - The system level – Limits are enforced for everyone who runs on that system.
  - On a per-user basis – Limits are enforced only for the user running on a particular system
- CPU time – The maximum CPU seconds per process
- Core dump size – The maximum size of a core dump

---

## Changing Personal Limits

You can change your personal limits on all machines by using the `limit` command (C shell) or `ulimit -s -d` command (Bourne, Korn, or Bash shell).

---

## Checking the Data-Size Limit

If you have enough swap space but still encounter OS limits, use the `limit` command to find out what the `datasize` variable is set to. The `limit` command is a built-in C shell (`cs`) command. Make sure you are in `cs` before you execute `limit`.

The `limit` command displays user-level limits:

```
% limit
cputime      unlimited
filesize     unlimited
datasize     524280 kbytes
stacksize    8192 kbytes
coredumpsize unlimited
descriptors  256
memorysize   unlimited
```

Note:

In this example, a single process is permitted to use up to 524 MB.

---

## Increasing the Data-Size Limit

If your user-level data-size limit is too low, you can increase it by entering,

```
% limit datasize xxxxm
```

where `xxx` is the number of megabytes and `m` stands for megabytes.

---

## Changing an Unlimited Data Size

On some Solaris systems, setting the data size to unlimited defaults to a data size of only 2 GB. To set a larger data size, set the data size explicitly. For example, set it to 3.8 GB by using the following command:

```
% limit datasize 3891m
```

---

## Checking the stack size

If you still encounter OS limits and the data size is sufficient, check the stack size. Do not set a stack size of "unlimited."

The default stack size is sufficient. (Depending on the OS, it is typically set to 8,192 or 10,240 KB). A stack size that is larger than the default will cause the data size to be smaller than required. Because the stack size is taken at the beginning of the process, it uses memory that would normally be available for data. Therefore you should set the stack size higher than the default only when absolutely necessary.





# 2

## Installation Preparation

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This document provides information about steps to complete before you install Synopsys tools and instructions for installing the tools.

The following sections are included:

- [Overview of Installation Process](#)
- [Synopsys Installer Download and Installation](#)

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## Overview of Installation Process

To install a Synopsys tools, follows these steps:

- Obtain the Synopsys Installer installation file by EST download or from CD.
- Uncompress the Synopsys Installer installation file in `my_installer_directory`.
- Download the Synopsys product installation files by EST or obtain a CD (or DVD). Note that starting with A-2007.12, product files on CD (or DVD) are the same as in EST, which has tar files.
- Run the Synopsys installer and specify the Synopsys product installation files to install. This step is covered in “[Chapter 3, “Product Installation.”](#) You can run the Synopsys Installer in text mode or in GUI mode.

---

## Synopsys Installer Download and Installation

Use the Synopsys Installer to install product installation files. You can install the Synopsys Installer by EST or CD. Afterwards, you uncompress the Synopsys Installer installation file in `my_installer_directory`, you can download and install product installation files. Installing the Synopsys Installer is covered in the following sections:

- [About the Synopsys Installer Software](#)
- [Obtaining the Synopsys Installer Electronically or by CD](#)
- [Uncompressing the Synopsys Installer File](#)

If you encounter any problems, see SolvNet article 023312, “Troubleshooting Synopsys Installer Problems,” at <https://solvnet.synopsys.com/retrieve/023312.html>.

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## About the Synopsys Installer Software

Users installing by EST must download the `installer_version.tar.Z` file, where `version` is the latest version of the Synopsys Installer, from the SolvNet Download Center or from the “rev” directory of the Synopsys FTP site at <ftp.synopsys.com>. For the Download Center or the FTP site, a Solvnet username and password is required. The `installer_version` file includes the scripts and files for installation by GUI or command line. When you install a new product release, always download the latest version of the Synopsys Installer. Note that the Synopsys Installer is backward compatible with previous product releases.

Instead of downloading the Synopsys Installer into each product's temporary directory, it is recommended that you download it and uncompress it in an empty stand-alone directory. If you do that, when you run the installation script, you will be prompted to provide a path to the temporary directory containing the product installation files.

---

## Obtaining the Synopsys Installer Electronically or by CD

Obtain the Synopsys Installer by EST download or from CD. Only authorized sites are eligible to order CD media. You can obtain the Synopsys Installer software in one of the following ways:

- From the Web by using HTTPS
- By File Transfer Protocol (FTP)
- On a CD

For help with Synopsys Installer download problems, contact the Synopsys Electronic Software Transfer (EST) department:

E-mail support: [est-adm@synopsys.com](mailto:est-adm@synopsys.com)

Telephone support: 650-584-1631

Note:

The EST department does not help with installation or licensing issues. For help with such issues, contact your local Support Center.

## Obtaining the Synopsys Installer by HTTPS

To download the Synopsys Installer by HTTPS using a web browser, follow these steps:

1. Browse to the Download Center at <https://solvnet.synopsys.com/DownloadCenter>.
2. If requested, enter your Synopsys SolvNet username and password.
3. Under My Product Releases, choose Synopsys Installer.
4. Choose the latest product version from the list of available versions and click Download Here.
5. Click the download button to the right of `installer_v<latest_version>.tar.Z` and any other file you want to download. You may download multiple files simultaneously.
6. Follow the browser prompts to select a destination directory.
7. Uncompress and untar the tar.Z file to obtain the Synopsys Installer. See [“Uncompressing the Synopsys Installer File” on page 2-4](#) for more information.

## Obtaining the Synopsys Installer by FTP

To download the Synopsys Installer by FTP, follow these steps:

1. Start an ftp session to ftp.synopsys.com.

```
% ftp ftp.synopsys.com
```

2. Enter your Synopsys SolvNet username.

3. Enter your Synopsys SolvNet password.

4. Type binary at the FTP prompt to set the transfer mode to binary.

```
ftp> binary
```

5. Type the following commands to download the files:

```
ftp> cd /rev
ls installer* #Look for the latest "installer" directory
cd installer_v<latest_version>
get installer_INSTALL_README.txt
get installer_v<latest_version>.tar.Z
```

6. Uncompress and untar the tar.Z file to obtain the Synopsys Installer. See [“Uncompressing the Synopsys Installer File” on page 2-4](#) for more information.

## Obtaining the Synopsys Installer by CD

Starting with the A-2007.12 release, the Synopsys Installer comes on a separate CD and is no longer included with product CDs. The Synopsys Installer tar file on the CD is the same as the EST tar file.

---

## Uncompressing the Synopsys Installer File

After you download the Synopsys Installer tar.Z file or copy it from CD, you obtain the Synopsys Installer by uncompressing the `installer_version.tar.Z` file in a separate installer directory, `my_installer_directory`. For example,

```
% cd /usr/my_installer_directory
% cat installer_version.tar.Z | uncompress | tar xvf
```

# 3

## Product Installation

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This document provides information about steps to complete before you install Synopsys tools and instructions for installing the tools.

For product installations you do not need to untar the product tar file. Beginning with the Synopsys Installer version 2.0 release, the Synopsys Installer works with compressed product installation tar files.

If you are using an older Synopsys Installer, upgrade to version 2.0 or higher before installing products. Synopsys Installer version 2.0 and higher work directly with product tar files and do not require that they be uncompressed before installation.

Note:

If you need a Synopsys Installer older than version 2.0, you must first untar the product tar files before installing products. This procedure is not covered in this chapter.

The ArchPro, CosmosScope, Magellan, Saber and Saber HDL, and Saber Optional tools do not use the Synopsys Installer. For installation information for one of these product, see product installation notes for tool in question.

The following sections are included:

- [Synopsys Product Installation File Download Methods](#)
- [Installing Products with the Synopsys Installer](#)

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## About the Synopsys Installer

This version of the Synopsys installer has been enhanced to accept product tar files directly. You do not need to untar the product installation files before installation.

The Synopsys Installer also accepts .taz or .bz2 files from untarring EST files or from older CD-ROM images. However, if the temporary source directory contains both tar files and extracted .taz or bz2 files, this warning message is issued when running the Synopsys Installer:

```
Both EST tar file(s) and CD image are found under <directory>.
Installer will discard CD image and proceed with EST tar file(s) only.
Answer Yes to continue or No to select a different directory [yes].
```

Answering yes to this question causes the Synopsys Installer to continue with installation. The Synopsys Installer ignores the extracted .tar or .bz2 files and uses only the unextracted tar files.

Limitation for CD products:

When providing a temporary path for expanding an image, do not use environment or shell variables as part of the path name. The Synopsys Installer version 2.0 cannot handle them correctly.

---

## Synopsys Product Installation File Download Methods

After installing the Synopsys installer, you download Synopsys product installation files in one of the following ways:

- From the Web by using HTTPS
- By File Transfer Protocol (FTP)
- By CD or DVD

For each product, you must download one common file, platform-independent package, and one or more platform-specific installation files.

E-mail support: [est-adm@synopsys.com](mailto:est-adm@synopsys.com)

Telephone support: 650-584-1631

Note:

The EST department does not help with installation or licensing issues. For help with such issues, contact your local Support Center.

To access the online EST Troubleshooting Guide, go to <http://www.synopsys.com/cgi-bin/est.cgi>

**Important:**

Install each version of the software in a new directory. Do not install different versions of Synopsys software in the same directory.

---

## About Product Installation Files

Before downloading the product installation files, first install the Synopsys Installer, see [Chapter 2, "Installation Preparation."](#) It is recommended that you download the Synopsys Installer into a separate directory. This enables you to use the same Synopsys Installer for each Synopsys product that uses the common installation method.

Product installation files are packaged as tar files. Product installation files that the Synopsys Installer supports use the following naming convention:

```
productname_productversion_common.tar  
productname_productversion_platform.tar
```

For each tool you want to install, substitute the appropriate product name and version for *productname\_productversion* and platform keyword for *platform*. For supported platforms for by release, see the Download Center on SolvNet.

**Important:**

For each product except Sentaurus documentation, you must download one common file, a platform-independent package, and one or more platform-specific files.

For TetraMax, download one common file and one or more platform-specific files for TetraMax overlay over synthesis (tx) or TetraMax stand-alone (txs). If you are licensed for TetraMax IddQTest, also download TetraMax IddQTest (idq).

---

## Downloading the Product Installation Files From the Web by HTTPS

You can download multiple product installation files into the same temporary directory.

To download files from the Web,

1. Create an empty directory to download your product installation files into. For example,

```
% mkdir /tmp/product  
% cd /tmp/product
```

2. Browse to the Download Center at <https://solvnet.synopsys.com/DownloadCenter>.
3. If requested, enter your Synopsys SolvNet username and password.
4. Under My Product Releases, choose the product you wish to download.
5. Choose the latest product version from the list of available versions and click Download Here.
6. Click the download button to the right of each file you want to download. (You may download multiple files simultaneously.) For most products, you will need to download a common file and a platform-specific file.
7. Follow the browser prompts to select a temporary destination directory.
8. Follow the browser prompts to select a destination location.

---

## Downloading the Product Installation Files by FTP

You can download multiple product installation files into the same temporary directory. For latest FTP instruction, see the Download Center on SolvNet.

To download the files by FTP,

1. Create an empty directory to download your product installation files into. For example,

```
% mkdir -p /usr/my_product_install_file_dir
% mkdir /tmp/product
% cd /tmp/product
```

2. Start an FTP session to ftp.synopsys.com.

```
% ftp ftp.synopsys.com
```

3. Enter your SolvNet user name and password.

4. At the ftp prompt, enter the following commands:

```
ftp> binary
ftp> cd ./rev
ftp> cd productname_productversion
ftp> get productname_productversion_common.tar
ftp> get productname_productversion_platform.tar
```

### Note:

You can obtain the latest product-specific download instructions from the Download Center, which is accessible through SolvNet.

---

## Installing Products with the Synopsys Installer

This chapter provides information about installing Synopsys tools. You install most Synopsys tools by using the Synopsys Installer on product installation tar files that are available by EST downloaded or from CD (or DVD).

Before installing Synopsys tools, make sure your umask setting is correct. In general, a umask of 022 is recommended. However, if your specific product requires stricter access rights, they will be applied automatically during installation. See the UNIX man pages for more information about umask.

To install Synopsys tools, it is recommended that you log on as root or have system administrator privileges. You need write permission for the installation directory.

You can install many Synopsys products by using a graphical user interface (GUI mode), or from the command line (text mode). This chapter includes procedures for using both methods in the following sections:

- [Running the Installer in Text Mode](#)
- [Running the Installer in GUI Mode](#)

---

### Running the Installer in Text Mode

To install the software by using the Synopsys Installer in text mode,

1. Set the `DISPLAY` environment variable. For example,

```
% setenv DISPLAY my_display:0.0
```

Note:

The text installer will not run unless a valid `DISPLAY` variable is set. The text installer requires this step because some products' post installation scripts are GUI-based.

2. Add the stand-alone installer directory to the UNIX path. For example,

```
% set path=(/usr/synopsys/installer $path)
```

3. Execute the following command:

```
% installer
```

This brings up the Installer in text mode. To install Synopsys tools, it is recommended that you log on as root or have system administrator privileges. You need write permission for the installation directory.

**Note:**

The installer installation file should be in a separate stand-alone directory. When you run the installation script you will be prompted to provide a path to the temporary directory containing the product installation files.

4. Answer the installation program prompts.

**Important:**

When you are prompted to choose a location for installing the software, do not select the download or temporary directory. You must specify the full path to the destination directory. Do not install different versions of Synopsys software in the same directory.

5. Repeat steps 1, 2, and 3 for each tool you want to install.

**Note:**

Before you can run Synopsys tools, the Synopsys Common Licensing (SCL) software must be installed. In addition, a licensing variable such as `SNPSLMD_LICENSE_FILE` or `LM_LICENSE_FILE` must be set. For details about Synopsys licensing software, see the Synopsys Licensing QuickStart Guide Web page at <http://www.synopsys.com/keys>.

**Example 3-1** shows the steps detailed above in a sample Synopsys media installation script for synthesis tools on the Sun Solaris platform.

*Example 3-1 Synopsys Media Installation for the Synthesis Tools*

```
Synopsys(R) Installer
Version 2.0.0
Copyright (C) 2008 Synopsys, Inc.
All Rights Reserved
```

```
Instructions:  The list within {} shows the choices for a given option.
               The entry within [] shows the default selection when you
               press the Return key.  You can cancel the installation by
               entering quit when prompted for input.
```

```
Enter the path to the top-level directory containing the EST (ftp) or CD/DVD-ROM product
files for this release [/mnt/cdrom]: /mnt/cdrom
```

```
Enter the path to temporary directory for expanding the product tar files (need 616M
for all) [/tmp]:
```

```
Installer: Extracting release information from syn_vB-2008.09_amd64.tar ...
Installer: Extracting release information from syn_vB-2008.09_common.tar ...
Installer: Extracting release information from syn_vB-2008.09_linux.tar ...
Installer: Extracting release information from syn_vB-2008.09_suse32.tar ...
Installer: Extracting release information from syn_vB-2008.09_suse64.tar ...
```

```
The following releases are available under /mnt/cdrom:
```

[ 1] B-2008.09 - (syn)

Select a release to install [1]: 1

Release selected: B-2008.09

Your site ID number is in the upper-right corner of your Synopsys license key certificate. If you have trouble locating it, contact your Synopsys representative.

Site ID number [000]:

The site administrator is your site's main contact for Synopsys licensing and other tool issues. You can leave your own name or type a different name.

Site administrator [customer]:

The contact information is the phone number and/or e-mail address of the site administrator.

Site contact information [customer@yourcompany.com]:

Select Synopsys product(s) to install:

[ 1] syn - Core Synthesis Tools

Enter the list of product(s) to install [1]:

Product(s) selected: syn

The platform-independent package for a particular product contains support files that are common to all the platforms. The first time you install a product to a directory, you must install the platform-independent package (common file).

Install common file for product syn [yes]:

The common package will be installed for syn

Select platform(s) to install:

[ 1] amd64 - Linux AMD Opteron; 64-bit  
[ 2] linux - Red Hat Enterprise Linux  
[ 3] suse32 - SUSE LINUX Enterprise Server; 32-bit  
[ 4] suse64 - SUSE LINUX Enterprise Server; 64-bit

Enter the list of platform(s) to install [1]: 1 4

Platform(s) selected: amd64 suse64

Enter the full path to the directory where you want to install Synopsys B-2008.09 products. If the directory does not exist, it will be created. [/usr/synopsys/B-2008.09]:

Create destination directory /usr/synopsys/B-2008.09?

Answer Yes to create the directory or No to select another directory. [yes]:

---

Here is your final selection for installing Synopsys Tools:

```
VERSION:      B-2008.09
PRODUCTS:    syn
PLATFORMS:   amd64 suse64
```

```
Synopsys Media Directory (from): /mnt/cdrom
Synopsys Install Directory (to): /usr/synopsys/B-2008.09
```

Platform-Independent Package(s) for : syn

```
Disk space required:      739 MB
Disk space available:    91593 MB
```

---

If all the information is correct, continue with the installation.  
Install? [yes]:

Wait while cksum is being verified.

```
Installer: Extracting syn_vB-2008.09_common.tar ...
Installer: Extracting syn_vB-2008.09_suse64.tar ...
Installer: Extracting syn_vB-2008.09_amd64.tar ...
  Installing amd64 code for product syn
  Installing platform_independent code for product syn
  Installing suse64 code for product syn
  Create site_info...
```

Installation has finished successfully.

Synopsys tools require that a supported version of Synopsys Common Licensing (SCL) be installed and serving the necessary licenses. For information on how to obtain SCL, or your license key file, see <http://www.synopsys.com/keys>

For any postinstallation setup requirements, see the product-specific chapters in the Installation Guide at <http://www.synopsys.com/install>

To receive timely Synopsys support on tool related issues, you must install ViewConnect support software along with other Synopsys tools. If you have not yet installed ViewConnect, go to <https://solvnet.synopsys.com/viewconnect#d> to download and install the required binary files.

---

## Running the Installer in GUI Mode

To install the software by using the Synopsys Installer in GUI mode,

1. Set the `DISPLAY` environment variable. For example,

```
% setenv DISPLAY my_display:0.0
```

2. Add the stand-alone installer directory to the UNIX path. For example,

```
% set path=(cd /usr/my_installer_directory $path)
```

3. To use the GUI to install Synopsys products, start the GUI by entering

```
% installer -gui (or setup.sh)
```

This brings up the Installer GUI.



Note:

The installer -gui (or setup.sh) installation file should be in a separate stand-alone directory. When you run the installation script, you will be prompted to provide a path to the temporary directory containing the product installation files.

## Running the Installer on Product Installation Files

The program starts automatically and the Synopsys Installer screen appears. Click Start to begin the installation and respond as necessary to each screen.

Note:

During the installation process, you can exit the installation at any time. If you click Cancel during the product-specific installation, you will be returned to the Synopsys installation setup program. To exit completely, you must click Finish.

1. Browse or enter the path to the product installation files. If you are running the Synopsys Installer in a location different from where the product installation files reside, browse for the directory containing the files or enter the path to the directory.

Click Continue to view the next screen.

2. Select the version of the release you want to install.

Click Next to continue.

3. Enter your site ID and the name and e-mail address of your license administrator.

Your site ID was shipped in the package with your Synopsys tools, or if you download the software, it is in your Synopsys Order Notification e-mail. For additional ways to locate your site ID, see [“Finding Your Site Identification Number” on page 1-2](#).

Note:

The default site identification number is 000. When you are prompted to enter your site ID during the installation process, you can leave the default value of 000 and press Enter to continue the installation.

Click Next to continue.

4. Select the products you want to install. Each stand-alone product must be installed in an empty directory.

Click Next to continue.

5. Review the product package. The platform-independent package, or common file, is selected automatically. This file is required when you are installing a new version of a product for the first time. If you do not want to install the common file, deselect the box next to the appropriate tool.

Click Next to continue.

6. Select the platform. You can select one or more platforms on which to install the products.

Click Next to continue.

7. Select the directory in which you want to install the product. You can browse for a directory or enter the full path to the destination directory in the “Install to” box.

Click Next to continue.

8. Verify the selected information, then click Install to begin the installation or click Back to change information.

9. Wait while the products are installed. Click Cancel to return to the Synopsys installation setup program.

The “Installation progress” bar lets you track progress as the program installs the products. You can also see where you are by checking the current action.

10. When the program completes the installation, click Install Another Product if you want to install additional products, or click Finish to exit the program.

Note:

Before you can run Synopsys tools, the Synopsys Common Licensing (SCL) software must be installed. In addition, a licensing variable such as `SNPSLMD_LICENSE_FILE` or `LM_LICENSE_FILE` must be set. For details about Synopsys licensing software, see the Synopsys Licensing QuickStart Guide Web page at <http://www.synopsys.com/keys>.

---

## Product Installation Files From CD or DVD

You can install Synopsys products from CD or DVD. Only authorized sites are eligible to order CD or DVD media.

For brevity, the remainder of this document uses CD for CD or DVD. If your product is on a DVD, substitute DVD for CD in the instructions below and use the commands appropriate for your specific DVD-ROM configuration.

The instructions for installing the Synopsys Installer from CD are identical to those for installing it by EST with the exception that instead of downloading the Installer files using FTP, you may must copy them to a mounted hard drive.

Note:

The Synopsys Installer can no longer be run directly from CD-ROM.

Before beginning installation, you must either download the Synopsys Installer or copy it from a Synopsys Installer CD onto a mounted hard drive. After copying the installer files to a hard drive, uncompress and untar it. See “[Uncompressing the Synopsys Installer File](#)” for details.

To install a Synopsys product from a CD, follow these steps:

1. Insert the product CD into the CD-ROM drive.
2. Mount the CD if necessary. For example, enter

```
% mount -o ro /dev/dsk/c2t1d4s0 /cdrom
```

Mounting the CD might require root access privileges. If you do not have root access privileges, see your system administrator for assistance. If you have the proper privileges, complete the following steps.

Mounting instructions vary by operating system. See your system man pages for the correct CD mounting commands.

Note:

By default, some systems mount the CD-ROM drive automatically.

3. From the Synopsys Installer directory, run the installer on the product installation files on the CD. "See "[Uncompressing the Synopsys Installer File](#)" for details. When prompted for the source directory, enter the path to the CD-ROM directory containing the product files. When prompted for a temporary directory to expand product files, enter the path to a temporary directory on your hard drive. This directory is deleted once installation is finished.
4. When installation is finished, unmount the CD by using the appropriate command for your operating system. For example, enter

```
% umount /cdrom
```

Note:

If you are running the Solaris vold daemon, use the `eject` command to unmount the CD.

5. Remove the CD from the drive.

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